

REMARKS

The present application contains claims 1-117, the status of which is as follows:

- (a) Claims 1-111 have been canceled.
- (b) Claims 112-117 are new.

No new matter has been added.

The present patent application claims the benefit, through various intermediate applications, of a US patent application that issued as US Patent 6,148,232 (the '232 patent).

The claims of the present patent application, as currently amended, are all narrower in scope than claim 1 of the '232 patent. In particular, each of the independent claims of the present patent application (claims 112, 113, and 117) includes all of the limitations of claim 1 of the '232 patent as issued. As such, it is respectfully submitted that each of these independent claims is in condition for allowance. In addition, it is respectfully submitted that the three dependent claims in the present patent application (claims 114-116), being narrower in scope than claim 113, are in condition for allowance, as well.

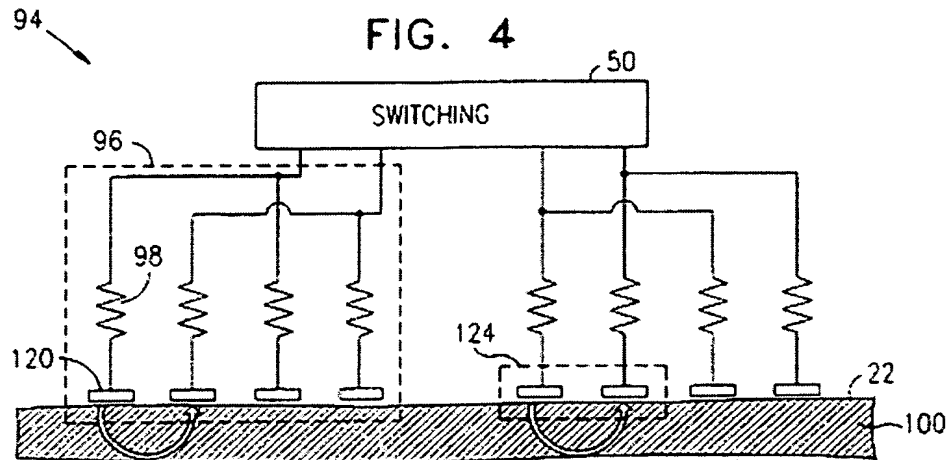
Claim 112 is supported as described in the following table:

Claim element(s)	Support
A device for ablating stratum corneum epidermidis of skin on the body of a subject, comprising: a plurality of electrodes, which are adapted to be applied to the skin of the subject at respective points; and a power source, which is	This portion of the claim is like claim 1 of the '232 patent as issued, except that it additionally includes the underlined words "into the body." These words are drawn from claim 35 of the '232 patent as issued, and additionally, are supported throughout the specification.

adapted to apply electrical energy between two or more of the plurality of electrodes, to cause ablation of an area of the stratum corneum during a first time period, so as to facilitate passage of a substance through the ablated area <u>into the body</u> during a second time period, subsequent to the first time period,	
wherein the power source is adapted to apply the electrical energy as alternating current,	<p>This portion of the claim is drawn from claim 23 of the '232 patent as issued. Claim 23 depends on claim 1. Additionally, the use of alternating current is described in multiple places in the specification, for example:</p> <p>"Alternatively or additionally, a larger AC current which produces micro-channels is supplemented by..." (p. 46, lines 4-5)</p> <p>"Fig. 7 is a schematic illustration of another electrode assembly 150, comprising an AC current source 154 coupled in series with an optional resistive element 152 in order to drive current through electrodes 120 and skin 22, in accordance with a preferred embodiment of the present invention..." (p. 46, 2nd full paragraph)</p>
wherein the plurality of electrodes comprise a common electrode and a plurality of positive electrodes, and	<p>This portion of the claim is similar to claim 22 of the '232 patent (which depends on claim 1). Claim 22 of the '232 patent recites a common electrode and a plurality of positive electrodes. (It additionally recites a particular geometrical configuration of these. Claim 112 does not</p>

	<p>recite the particular geometrical configuration.)</p> <p>In addition, the present patent application describes, in the first full paragraph on p. 39: "Fig. 4 is a schematic illustration of an electrode assembly 94, comprising a plurality of electrodes 120, which are placed on skin 22 in order to generate micro-channels in the stratum corneum 100, in accordance with a preferred embodiment of the present invention. Electrodes 120 in assembly 94 are grouped in sometimes overlapping sets of two or more electrodes, forming a plurality of electrode sets 124, one of which is indicated with a dashed line in Fig. 4. <u>Current, coming from switching unit 50, generally flows from one electrode in each electrode set to the other electrodes of the set</u>" (emphasis added).</p>
<p>wherein the power source is configured such that, during a phase of the alternating current, the alternating current from the power source flows from each positive electrode, through the skin, to the common electrode.</p>	<p>The support for this portion of the claim is again claim 22 of the '232 patent. (The final sub-paragraph of claim 22 reads: "wherein the power source is adapted such that current from the power source flows from each positive electrode through the skin to the common electrode." Additionally, the description of Fig. 4 quoted above supports this portion of the claim.</p> <p>The words "during a phase of the alternating current" are added to enhance clarity, and are inherently supported in that alternating current flows in one direction during one phase, and in the opposite direction during another phase.</p>

New independent claim 113 is also based on claim 1 of the '232 patent as issued, but additionally recites "a plurality of resistors, coupled to the plurality of electrodes." This additional recitation is supported, for example, in Fig. 4:



Claim 114, which recites "wherein each resistor is coupled to a respective one of the plurality of electrodes," is clearly shown in Fig. 4.

Claim 115, which recites "wherein the power source is adapted to drive the current from a first one of the electrodes, through the stratum corneum, to a plurality of other ones of the electrodes," is supported, for example, in the following portion of the description of Fig. 4: "Current, coming from switching unit 50, generally flows from one electrode in each electrode set to the other electrodes of the set" (first full paragraph on p. 39).

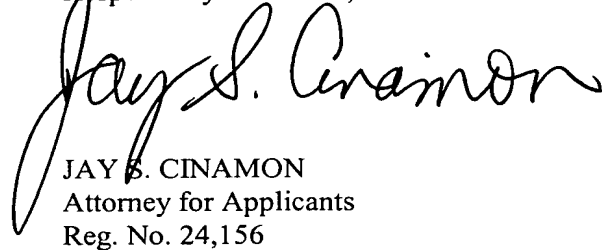
Claim 116, which recites "wherein the power source is adapted to apply the electrical energy as alternating current," is supported, for example, in Fig. 7, which is described as follows: "Fig. 7 is a schematic illustration of another electrode assembly 150, comprising an AC current source 154 coupled in series with an optional resistive element 152 in order to drive current through electrodes 120 and skin 22, in accordance with a preferred embodiment of the present invention..." (second full paragraph on p. 46).

The claim elements "plurality of electrodes" and "power source" of new independent claim 117 are supported as described hereinabove with respect to new independent claim 112. Additionally, claim 117 recites: "wherein the two or more of the plurality of electrodes comprise: (a) a plurality of current-driving electrodes, and (b) a plurality of return electrodes, and wherein, in applying the electrical energy, the power

source is adapted to drive current from the current-driving electrodes, through the stratum corneum, to the plurality of return electrodes." This recitation is supported, for example, as follows: "It is to be understood that any of the drug delivery or analyte extraction devices described hereinabove may similarly comprise a plurality of current-driving electrodes and one or more return electrodes" (p. 60, last full paragraph).

Allowance of the claims in the present application is respectfully requested.

Respectfully submitted,



JAY S. CINAMON
Attorney for Applicants
Reg. No. 24,156

ABELMAN, FRAYNE & SCHWAB
666 THIRD AVENUE, 10TH FLOOR
NEW YORK, NEW YORK 10017
(212) 949-9022
(212) 949-9190

Colb\6 9 06 avrahami.px